R 81

FINAL ENVIRONMENTAL IMPACT STATEMENT
ROYAL GORGE EIS AREA, COLORADO
PROPOSED DOMESTIC LIVESTOCK GRAZING PROGRAM

R81

NEWARK PUBLIC LIBRARY

OCT 14 1980

U. S. GOVT. PUBS.
DEPOSITORY 376

Prepared By

BUREAU OF LAND MANAGEMENT

DEPARTMENT OF THE INTERIOR

I 1.98:

March 81-2582

United States Department of the Interior

BUREAU OF LAND MANAGEMENT
COLORADO STATE OFFICE
ROOM 700, COLORADO STATE BANK BUILDING
1600 BROADWAY
DENVER, COLORADO 80202

Enclosed is the Final Environmental Impact Statement (FEIS) for Grazing Management on the Royal Gorge Resource Area in south central Colorado. The draft environmental statement was sent to you earlier. The FEIS consists of the comments received on the draft EIS and the responses to those comments. No changes in the analysis of the proposal or its impacts were required by the comments received on the draft statement.

The Canon City District Office of the Bureau of Land Management prepared the environmental impact statement pursuant to Section 102(2)(C) of the National Environmental Policy Act of 1969. The document describes and analyzes impacts that would result from the proposed grazing management plan, along with four alternatives to that plan.

Thank you for your interest in this environmental impact statement.

Sincerely,

Charles W. Luecker

Acting State Director

CONSERVE AMERICA'S ENERGY

Save Energy and You Serve America!

March 81-2582

TABLE OF CONTENTS

State Director's Letter. 2

Summary. 3

District Manager's Statement. 4

Consultation and Coordination 4

Public Comments on the Draft EIS 5

Written Comments 6

Public Hearing Comments 16

Errata 22

SUMMARY

( ) Draft (X) Final Environmental Impact Statement

Department of the Interior, Bureau of Land Management

1. Type of Action: (X) Administrative ( ) Legislative

2. Brief Description of Action: The proposed action of this environmental impact statement (EIS) involves a livestock grazing management program within the Royal Gorge Resource Area on 589,675 acres of Federal lands. The EIS area lies in south central Colorado east of the Continental Divide.

The proposed action includes the following components:

A. Intensive management of grazing on 379,380 acres of Federal land.

B. Less intensive management of grazing on 189,900 acres of Federal land.

C. Building range improvements and applying land treatments to facilitate grazing management.

3. Summary of Environmental Impacts:

Beneficial Impacts: The production of desirable vegetation and the total vegetation ground cover would increase. Overall watershed conditions would improve. Wildlife habitat would improve and the numbers of big game and nongame animals would increase. Surface water quality would improve, and sediment yield would decrease. Livestock production per animal would increase in the long term.

Adverse Impacts: Range-related income, ranch values, and assessed valuation could decrease on some grazing operations. Disturbance of a small but unquantifiable number of archeological sites would continue.

4. Alternatives Considered:

A. No action.

B. Elimination of grazing on public lands.

C. Nonintensive livestock management.

D. Management constraints, to improve watershed and wildlife habitat.

5. Comments Were Requested From: See Consultation and Coordination.

6. Draft Statement Made Available to EPA and to the Public: April 1980.

7. Final Statement Made Available to EPA and to the Public: August 1980.

CANON CITY DISTRICT MANAGER'S STATEMENT

This statement responds to comments concerning the proposed action and implementation of grazing systems in the Royal Gorge Grazing Draft Environmental Impact Statement.

Several comments received pertain to details of the proposed action rather than the analysis of the impacts of the proposed action. These include comments regarding the range survey conducted in the Royal Gorge Resource Area during 1977-78. These comments are important because they will be helpful when the management program is implemented and proper stocking rates are determined through actual use and utilization checks after the final EIS is published. Since these comments do not question the analysis of the proposed action, we have not specifically responded to them in this final EIS.

As the grazing systems are developed in allotment management plans, they will be based on experience with range management in the Canon City District and on the needs of the livestock industry as expressed by the permittees as they review the situation at the time and the Royal Gorge Management Framework Plan.

Flexibility to adjust to changing conditions and to new information is necessary to a good range management program. Allotment management plans and the grazing systems will be adjusted when appropriate to ensure that the range improvement and livestock production objectives of the plans can be accomplished. These changes may be made in consultation with the permittees and landowners involved.

If changes are made that would result in environmental impacts not analyzed in the draft EIS, an environmental assessment (EA) will be prepared that will also analyze site specific impacts of the grazing system, as stated in the draft EIS, Chapter 2, page 13.

CONSULTATION AND COORDINATION

EIS PREPARATION

This final environmental impact statement (FEIS) was prepared by an interdisciplinary team of natural resource specialists from the BLM Colorado State Office and Canon City District Office. These specialists provided expertise in botany, wildlife biology, soils, range management, visual resources, cultural resources, outdoor recreation, geology, hydrology, and socio-economics. The BLM Washington Office and Colorado State Office staff provided periodic review.

During preparation of the draft EIS, BLM requested information from other state and Federal agencies and universities with special expertise relating to the proposed action. Records of requests are on file in the Canon City District Office.

CONSULTATION AND COORDINATION IN PREPARATION OF THE DRAFT EIS

The Canon City District issued news releases and radio announcements describing the EIS and requesting the contribution of interested individuals and groups. Prior to this, the resource area conducted six public meetings with resource users, special interest groups, individuals, and agencies to gather information, opinions, and suggestions on preparation of land use plans upon which this EIS is based.

COORDINATION IN THE REVIEW OF THE DRAFT ENVIRONMENTAL IMPACT STATEMENT

Comments on the DEIS were requested from the following agencies and interest groups:

Federal Agencies

Department of the Interior
- Geological Survey
- Water and Power Resources Service
- Fish & Wildlife Service
- National Park Service
- Heritage Conservation and Recreation Service

Department of Agriculture
- Forest Service
- Soil Conservation Service

Department of Energy
Environmental Protection Agency
Adivsory Council on Historic Preservation

Colorado State Agencies

Office of the Governor
Colorado Division of Planning - State Clearing House (Distributes to State Agencies)
State Historical Society of Colorado

Local Government

Fremont, Teller, Park, Chaffee, Huerfano, Lake, Custer, El Paso County Commissioners and Planning Commission

Other Organizations

Colorado Association of Soil Conservation Districts
Colorado Cattlemen's Association
Colorado Farm Bureau
Colorado Four-Wheel Drive Clubs
Colorado Guides and Outfitters Association
Colorado Mining Association
Colorado Open Space Council
Colorado Parks and Recreation Society
Colorado Rivers Council
Colorado Sportsman Association
Colorado Wildlife Association
Colorado Wildlife Federation
Colorado Wool Growers Association
Environmental Defense Council
Greenbelt, Inc.
Izaak Walton League of America
National Audubon Society
National Council of Public Land Users
National Resources Defense Council
Sierra Club
Society for Range Management
Trout Unlimited
Western Colorado Sportsmen
The Wilderness Society
Canon City District Grazing Advisory Board (all members)
Range Livestock Operators

Various Interested Individuals

March 81-2582

PUBLIC COMMENTS ON THE DRAFT EIS

The Public Review Process and Procedures

The draft EIS was filed with the Environmental Protection Agency on April 1, 1980, which provided for a 45-day comment period extending from April 1 to May 27, 1980. A notice of availability of the draft EIS and a public hearing announcement were published on April 2, 1980, in the Federal Register.

Over 400 copies of the draft EIS were mailed to Federal, state, and local government agencies, private groups and organizations, and individuals for review and comment. News releases from Washington and Denver provided information on how to obtain copies of the draft EIS and where reference copies were available.

All written comments and the hearing transcripts will be sent with the final EIS to the Secretary of the Interior and the Environmental Protection Agency. They are also available for inspection at the Public Affairs Office, BLM, Denver; the BLM Office of Public Affairs, Washington, D.C.; and the Canon City District Office, Canon City, Colorado.

BLM reviewed and considered all comments and responded to those presenting new data, questioning findings of analyses, or raising questions or issues relating directly to the environmental impacts of the proposed action. BLM did not respond to comments not addressing the proposed action or the draft EIS.

Public Hearings

BLM conducted two formal public hearings on the draft EIS on May 8, 1980, at 1 p.m. and 7 p.m. in Canon City. Three BLM representatives served on the hearing panel, 18 individuals (not including BLM personnel) attended the hearing, and 9 testified. An administrative law judge presided, and a court reporter recorded the proceedings verbatim. The full hearing transcripts are available for review in the Canon City District Office.

WRITTEN COMMENTS

The following are written comments received from individuals, groups, and government agencies concerning the Draft Environmental Impact Statement.

Letters and statements from the public hearings are numbered in the order in which they were received. Each contribution is numbered and, where necessary, its parts are also numbered. For example, Letter 1 has only one part and is numbered 1-1. Letter 7 has four parts, numbered 7-1, 7-2, 7-3, and 7-4, respectively. All parts are numbered in the left hand margin of the letter with corresponding answers appearing to the right of the reproduced letter. Not all letters required a response.

For comments received at the public hearings, pertinent parts are quoted and corresponding answers appear to the right. The full text of these comments has been recorded and is available at the Canon City District Office.

The order of written comments received by BLM is as follows:

Index No.	Individual, Group, or Agency
1	Colorado Office of Energy Conservation
2*	Colorado Department of Health
3*	Elizabeth A. Hoagland
4*	Colorado Division of Water Resources
5	Colorado Division of Wildlife
6	Colorado State Department of Highways
7	USDA - Forest Service
8	Colorado Department of Agriculture
9	Heritage Conservation and Recreation Service
10*	Colorado Historical Society
11*	News-Review, Roseburg, Oregon
12*	Environmental Protection Agency
13*	Society for Range Management
Unnumbered due to arrival date *	Frank Dilley

*No response made by BLM.

March 81-2582

COMMENT LETTER 1

Colorado Office of Energy Conservation

MEMORANDUM

TO: Colorado Clearinghouse

FROM: Office of Energy Conservation

DATE: March 31, 1980

SUBJECT: Royal Gorge EIS Area-Proposed Domestic Livestock Grazing Program EIS #80-122

The Office of Energy Conservation has reviewed the Royal Gorge EIS Area-Proposed Domestic Livestock Grazing Program and offers the following comment:

1-1 Very little information is given regarding construction of improvements (wells, springs, pipelines, fences) relative to the energy conservation potential of each alternative. CEQ guidelines of November 29, 1978 (1502.16, 40 CFR) require EIS's to discuss energy requirements and conservation potential, natural or non-renewable resource requirements, and the conservation potential of various alternatives and mitigation measures. OEC would like to see a thorough evaluation of these energy considerations in the final EIS and in the site-specific Environmental Assessments for each Allotment Management Plans in the EIS area.

DF:KS:pl

1600 Downing Street • Denver, Colorado 80218 • (303) 839-2507

RESPONSES

1-1 Most of the improvements have a minimum of moving parts. For example, a spring development consists of a concrete block which is formed around a spring which catches water and channels it into a trough for use of wildlife and livestock. Fences, cattle guards, reservoirs, and water storage tanks are similar in this regard. Pipelines would function by gravity and involve no pumps. For wells, diesel pumps would be used, which require only a minimum of maintenance. Only two wells are proposed, and may not be developed. If they were developed, they would be located in remote areas where electrical power is not available. Given these conditions, energy expended for maintenance might possibly be greater than for electric powered pumps, but a net energy savings would be realized when considering the cost of extending powerlines to the well sites.

Most of the maintenance of these developments would be done through normal allotment inspections by livestock operators as they move their improvements from place to place. Visits to the multiple vement site would quite likely, therefore, be purpose and not simply for maintenance.

The chief energy expenditure for range improvements would take place during installation. Currently the Bureau of Land Management and other government agencies have mileage restraints on their vehicles. Whenever possible, workers travel together and combine tasks to save on the number of trips and miles traveled.

The estimated number of miles traveled by vehicles for installation of all improvements is:

Preferred Alternative: 105,360
Management Constraints: 980,100
Nonintensive: 48,000
Elimination of Grazing: 4.8 million
No Action: 0

With installation of improvements, some diesel fuel would be consumed in moving equipment to and from sites and operating equipment during construction. This was calculated to be:

Preferred Alternative:

Pipeline construction =	500 gallons
Storage tanks =	500 gallons
Reservoirs =	1,340 gallons
Spring developments =	1,675 gallons
Rainfall catchments =	7,000 gallons
	11,025 gallons

Management Constraints:

Reservoirs =	450 gallons
Spring developments =	550 gallons
Rainfall catchments =	2,500 gallons
	3,500 gallons

In terms of energy expenditure, the most expensive Grazing alternative would be Elimination of would be because of the 10,000 miles of fence that would have to be built to prevent livestock trespass. The cheapest would be No Action. The other alternatives would fall somewhere in between. Management Constraints would be somewhat more expensive than the Preferred Alternative; the Preferred Alternative somewhat more expensive than the Nonintensive Alternative. The only potential for greater energy efficiency in installation of proposed improvements might be the installation of electrically operated pumps for wells, but the cost of bringing power to remote areas to operate just two wells would not be efficient in terms of return on investment.

COMMENT LETTER 2

COLORADO DEPARTMENT OF HEALTH

4210 EAST 11TH AVENUE · DENVER, COLORADO 80220 · PHONE 320-8333
Frank Traylor, M.D., Executive Director

DATE: April 18, 1980

SUBJECT: NON-STATE ASSISTANCE

REVIEW AND COMMENTS

TO: Stephen O. Ellis
Division of Planning

PROJECT TITLE: Royal Gorge EIS Area - Proposed Domestic Livestock Grazing Program, #80-122

STATE IDENTIFIER:

COMMENTS: (Due May 1, 1980) ADDITIONAL COMMENTS: Water Quality Control - As indicated by the study, any of the alternatives analyzed except the No Action alternative would lead to a decrease in soil erosion and sediment entering the Arkansas River. Therefore, with regard to water quality, any of the action alternatives would be preferable to the Present Situation/No Action alternative.

APR 22 1980

DIV. OF PLANNING

Name, Title
Steve Kelsey, Program Administrator

SOC-3, Jan 79

COMMENT LETTER 3a

3065 E. Hyw. 50
Canon City, Colorado
April 20, 1980

District Manager, B.L.M.
P.O. Box 311
Canon City, Colorado

Dear Sir:

The following comments are directed toward the new format of the DEIS for the management of livestock grazing in the Royal Gorge Resource Area.

One of the reasons given for the new format was cost reduction in printing. As a concerned citizen, I think any means that is used to reduce cost is commendable. However, in my opinion, the new format has quite a few advantages other than the cost reduction.

Since part of my educational background consists of a M.A. in Reading from Ohio State University, I became interested in the readability factor of the format.

Using the Gunning Readability Formula (see enclosure) it was determined that the readability averaged from 9.2 to 14.4. This high readability factor can be attributed to the technical aspect of the document. The average American reads from a grade six level to a grade eight level. Therefore, may I reccomend that the introductions and conclusions be given more consideration for the "average reader."

Technical language should be kept for times when there is no other way of concise, exact communication (body of text?). Perhaps a classic anecdote on the subject will help convey my message.

A foreign-born plumber in New York City wrote to the Federal Bureau of Standards that he had found hydrochloric acid did a good job of cleaning out clogged drains.

The bureau wrote: "The efficacy of hydrochloric acid is indisputable, but the corrosive residue is incompatible with metallic permanence."

The plumber replied he was glad the bureau agreed.

Again the bureau wrote: "We cannot assume responsibility for the production of toxic and noxious residue with

COMMENT LETTER 3b

hydrochloric acid and suggest you use an alternative procedure."

The plumber was happy again at bureau agreement with his idea.

Then the bureau wrote: "Don't use nydrochloric acid. It eats hell out of the pipes."

Using one readability index only provides a very rough estimate of the difficulty of the reading material. Compensation for the alleged high readability factor has been accomplished through your excellent use of visuals, glossary, summaries, conclusions, titles, and use of appositives.

In conclusion, I think the newspaper format itself is reccomended not only for the visual effect (larger print, better use of graphics and maps) but also it is a less formidable document to an "average reader." Keep up the good work.

Yours truly,

Elizabeth A. Hoagland

Elizabeth A. Hoagland

COMMENT LETTER 3c

GUNNING READABILITY FORMULA

1. Select a sample of 100 words.
2. Find the average sentence length.
3. Count the number of words of three syllables or over. (Do not count proper nouns, easy compound words like "book-keeper," or verb forms in which the third syllable is merely the ending, as, for example, "directed."
4. Add average sentence length to the number of "hard words."
5. Multiply the sum by (.4). This gives the Fog Index.

Number of "Hard Words" plus average number of words per sentence sum multiplied by (.4) = Fog Index

Index comparison:

College, freshmen to graduates	13-17
High School, freshmen to seniors	9-12
Eighth Grade	8
Seventh Grade	7
Sixth Grade	6
Fifth Grade	5
Fourth Grade	4
Third Grade	3
Second Grade	2

March 81-258

COMME[illegible]NT LETTER 4

RICH[illegible]
ARD D. LAMM
Governor

STATE OF COLORADO 1876

J. A. DANIELSON
State Engineer

DIVISION OF WATER RESOURCES

Department of Natural Resources
1313 Sherman Street - Room 818
Denver, Colorado 80203
Administration (303) 839-3581
Ground Water (303) 839-3587

April 28, 1980

TO: STEPHEN O. ELLIS, STATE CLEARING HOUSE

FROM: HAL D. SIMPSON, CHIEF, WATER MANAGEMENT BRANCH

SUBJECT: ROYAL GORGE EIS AREA - PROPOSED DOMESTIC LIVESTOCK GRAZING PROGRAM

We appreciate the opportunity to review and comment on the Draft Environmental Impact Statement for Royal Gorge Area with respect to its impact on the water resources of the area. The statement adequately addresses the impacts on water resources through the range improvement as stated under the Preferred Alternative Section. Any wells or livestock water tanks for water development purposes would require an application be submitted to our office and the issuance of the proper permit.

We have no objection to the range improvement plan provided the development is conducted in accordance with all applicable state water statutes.

Hal D. Simpson

HDS/JMS:mvf

cc: Jim Clark
Bob Jesse

COMME[illegible]NT LETTER 5

ST[illegible]
R[illegible]rd D. Lamm, Governor
DEPA[illegible]RTMENT OF NATURAL RESOURCES
DIV[illegible]ISION OF WILDLIFE
Jack R[illegible] Grieb, Director
6060 B[illegible] Broadway
Denve[illegible]er, Colorado 80216 (825-1192)

COLORADO DIVISION OF WILDLIFE

May 5, 1980

Mr. Philip H. Schmuck, Director
Colorado State Clearinghouse
520 Centennial Building
1313 Sherman Street
Denver, Colorado 80203

ATTN: Stephen O. Ellis

Dear Mr. Schmuck:

This Division has had an opportunity to review the draft environmental statement for the Proposed Domestic Livestock Grazing Program, Royal Gorge EIS Area prepared by the Bureau of Land Management (BLM).

During the preparation of this document, BLM personnel worked closely with our field and staff personnel. Consequently, most of this Division's wildlife management concerns were adequately addressed.

5--1 We heartily endorse the alternative selected by BLM for this management unit. Its implementation should go a long way towards rehabilitating native ranges in this part of the state.

5--2 Our only problem with the proposed action is in respect to timing of riparian area protection measures. Because of the disproportionately high value of these areas for wildlife in relationship to their size, we would like to see this work accelerated beyond that proposed in the draft statement.

Thank you for providing us with the opportunity to comment on this document.

Sincerely,

Jack R. Grieb
Director

/d
cc: R. Evans
P. Barrows
E. Prenzlow
File: BLM Pub.Land Plan.
Royal Gorge

D[illegible]
EPARTMENT OF NATURAL RESOURCES, Harris Sherman, Executive Director • WILDLIFE COMMISSION, Michael Higbee, Chairman
Wilbur Redden, Vice Chairman • Sam Caudill, Secretary • Jean K. Tool, Member • Vernon C. Williams, Member
James Smith, Member • Donald Fernandez, Member • Richard Divelbiss, Member

RESPONSES

5-1 At this time BLM has not selected any alternative, but only proposed a plan. A final selection of which alternative or combination of alternatives will be implemented will be made after this EIS is completed.

5-2 Implementation of protection measures for riparian areas is, unfortunately, limited by budgetary and manpower constraints. If additional money and personnel become available, BLM will make every effort to expedite riparian habitat protection.

2

10 ROYAL GORGE ENV
COMMENT LETTER 6

RONMENTAL IMPACT STATEMENT

COLOR**ADO STATE DEPARTMENT OF HIGHWAYS**

May 2, 1980

Mr. Philip H. Schmuck
Director
Colorado Division of Planning
520 State Centennial Building
1313 Sherman Street
Denver, Colorado 80203

Dear Mr. Schmuck:

The Colorado Department of Highways has completed its review of the Draft Environmental Impact Statement for the Royal Gorge Area Proposed Domestic Livestock Grazing Program and has the following comments.

6-1 It does not appear that this program will affect the highway system directly. However, as this study does not identify the site-specific facilities to be constructed under the scope of the project, we would like to review the site-specific environmental assessment which BLM has stated they would prepare to analyze impacts before the construction of any facility.

Also, any changes in drainage patterns or highway crossings by pipelines for the range improvements will need to be coordinated with this Department.

Thank you for the opportunity to review this document.

Very truly yours,

Harvey R. Atchison
Director
Division of Transportation Planning

By
Barbara L.S. Chmuck
Manager
Impact Evaluation Branch

BG

4201 EAST ARKANSAS AVENUE DENVER, CO 80222 (303) 757-9011

COMMENT LETTER 7a

UNITED STATES DEPARTMENT OF AGRICULTURE
FOREST SERVICE
Rocky Mountain Region
11177 West Eighth Avenue, Box 25127
Lakewood, Colorado 80225

1950-3

State Director, Colorado State Office
USDI, Bureau of Land Management
Room 700, Colorado State Bank Bldg.
1600 Broadway
Denver, Colorado 80202

Gentlemen:

Thank you for the opportunity to review the Draft Environmental Impact Statement for the Royal Gorge Area. We have the following comments:

Credibility of the proposed action is compromised by inconsistent or misleading statements and figures. Examples are:

7-1 1. Page 6, column 2, 6th paragraph - indicates 44.8 miles of riparian habitat will be improved by the Preferred Alternative, but Table D-3 in Appendix D shows only 3.75 miles will show an upward trend.

7-2 2. Page 6, column 3, 2nd paragraph - first sentence states wildlife habitat would be "largely unaffected." Last sentence of the same paragraph indicates that habitat "would benefit." Statements on page 10 also seem inconsistent concerning the effects on wildlife (column 2, 1st paragraph), stating wildlife will benefit in both short and long term.

7-3 3. Page 10, column 2, 5th paragraph - states the needs of livestock would be met for the time being with minimal economic pressure on operators. How can AUM's be reduced from 39,369 down to 14,212 over a period of a few years with minimal economic pressure on operators? The need for such action is not questioned drastically, but we doubt that it can be done without affecting grazing permittees.

7-4 4. Page 31, map 3-6 - the excellence of the Arkansas River as a fishery is indicated in the narrative on page 30 (column 3), but map 3-6 tributaries lows its quality as lower than some of its small other public at are of only mediocre quality for fishing and ses.

RESPONSES

6-1 As site-specific on-the-ground grazing management plans (allotment management plans) are developed, they will be available for review by the Colorado State Department of Highways.

7-1 Riparian habitat on the following 44 miles of stream (page 45) will show an upward trend, however, the change will not improve the condition of the habitat enough to change condition class: Texas Creek, Currant Creek, Box Canyon Creek, Fourmile Creek (Canon City), Eightmile Creek, Cottonwood Creek, West Creek, Tallahassee Creek, Badger Creek, Hamilton Creek, and Grape Creek. Only those parts of the streams which cross public land were considered. The following 4 miles of stream will also improve, but they will, in addition, change condition class: Pass Creek (Salida), Tarryall Creek, Pruden Creek, Fourmile Creek (Buena Vista), Green Creek, and Big Cottonwood Creek. The remainder of the streams and rivers which cross public lands will maintain their present condition and trend. Improvement of riparian habitat will not necessarily mean an improvement in fisheries habitat. For instance, DeWeese Reservoir, an irrigation reservoir, often all but shuts down the flow in Grape Creek during the summer. Without a constant flow of water fishery habitat improvement is almost impossible.

7-2 Although wildlife habitat would be largely unaffected under the Preferred Alternative, there would be a small net improvement. Some improvement would occur in small portions of critical wildlife habitat, whereupon there would be a greater overall benefit to wildlife than the extent of the specific improvement might suggest.

7-3 As indicated on page 33, Table 3-4, 70 percent of the ranchers in the area depend on public land for 20 percent or less of their forage. Our interpretation of this figure as being a minimal impact is a matter of semantics and, therefore, open to challenge. Notwithstanding this, decision makers will still weigh the facts of the situation in taking action.

March 81-2582

COMMENT LETTER 7b

2.

Further, map 3-6 is misleading by indicating a habitat profile rating for the total length of most streams, including National Forest segments, but the rating usually applies only to short segments under BLM administration. As an example, BLM rates Badger Creek as poor, but segments of upper Badger Creek on the San Isabel National Forest would be rated as good.

Sincerely,

for CRAIG W. RUPP
Regional Forester

RESPONSES

7-4 Ratings are a measure of the quality of fisheries habitat and their ability to produce fish. This does not take into account other public uses. In terms of sport fishing, the Arkansas receives much heavier use than some of its small tributaries and, therefore, would rate higher as a fishery.

Stream fishery ratings were acquired with the assistance of the Colorado Division of Wildlife (DOW). According to DOW the entire length of Badger Creek is a poor fishery. Most brown trout spawning that takes place is on BLM-administered public land.

COMMENT LETTER 8a

STATE OF COLORADO

DEPARTMENT OF AGRICULTURE
1525 Sherman Street
Denver, Colorado 80203
(303) 839-2811

MEMORANDUM

DATE: May 9, 1980

TO: Stephen Ellis, State Clearinghouse

FROM: Jim Rubingh, Colorado Department of Agriculture JR

SUBJECT: Royal Gorge Draft EIS

The Colorado Department of Agriculture has the following comments to make on the Royal Gorge Draft EIS:

8-1 1. Extensive review of the 1977-78 range survey used in this EIS statement is recommended since there is apparently a wide disparity between the utilization reported here and that obtained by District and Range Specialists in the fall of 1979. The latter survey observations differ so markedly from those obtained in the 1977-78 report as to warrant a more exhaustive and objective diagnosis of the problem before drastic reductions as are recommended by this study are carried out.

8-2 2. Further on the spot utilization and trend checks which make use of the best available methodologies should be carried out. The Range Science Department at Colorado State University should be consulted on the development of such experimental designs.

8-3 3. Table 3 represents the per ranch income as being 34,449 for ranches of over 200 head. The table states that this excludes all depreciation and owner operator labor costs. If such costs are included the net revenues are only $1,220. This fact should be brought out and it should be realized that the severe livestock reductions which are called for in this study will have a major economic impact on many of the ranchers in this region.

8-4 4. At the present time the United States is losing 3 million acres of farmland each year to urban development and other conversion pressures. The U. S. Department of Agriculture is presently carrying out a multimillion dollar study called the National Agricultural Lands Study to study the loss of our agricultural lands. The Colorado Department of Agriculture has also finished a two-year study on the conversion of agricultural lands in the state. One of the major conclusions of this study is that the economics of farming and ranching, the "cost-price squeeze" in which the producer finds himself, is one of the major reasons behind the loss of agricultural land in Colorado. This draft EIS states that the action called for, the reduction of AUM's by 64 percent, may cause ranches which are now producing livestock to be sold and subsequently subdivided for rural homesites. The loss of these agricultural lands is likely to far outweigh any benefits which are achieved through the intensive range management which has been recommended by this study. This Draft EIS fails to even mention the

Richard D. Lamm, Governor
Morgan Smith, Commissioner
Donald Needham, Deputy Commissioner
Agricultural Commission
Henry Christensen, Rifle
Ben Eastman, Holly
John Stalley, Denver
Elmo Miller, Fort Lupton
Don Sanchez, Center
William Stephens, Gypsum
William Webster, Cortez
Clyde Wolcott, Granada
Kenneth Johnson, Denver

COMMENT LETTER 8b

permanent loss of this agricultural land in the section on long term adverse impacts which will result from the preferred alternative. The increased cost to local governments which have to provide services to these rural subdivisions is another impact which is overlooked.

It is somewhat confusing to try to understand how the federal government can spend millions of dollars trying to preserve agricultural lands with one study but will force agricultural producers out of business and agricultural land into urban uses through the recommendations of another study. Our department feels that it is imperative that the final EIS takes into account the permanent loss of productivity which will result if this action is implemented and producers are forced to sell their land because of the loss of the economic viability of their operations.

These comments are not meant to denean the authors of this EIS in anyway. They have carried out a most difficult assignment in a very professional manner. However, in light of the serious implications, both economic and social, which would result if the analysis presented here is in anyway inaccurate, it is important that all facts, data, methodoligies, and conclusions be carefully reviewed. The final course which is followed must be based upon the best facts available and common sense applied by knowledgable people.

RESPONSES

8-1 BLM is unaware of the utilization studies you refer to that were completed in the fall of 1979. However, the proposed reductions were not hastily formulated and they have a built-in sensitivity to actual conditions as they develop. The range surveys will be checked and adjusted, upward or downward, based on actual use information supplied by livestock operators and utilization information collected by BLM. If reductions are required, they will be made to insure a moderate level of utilization of range forage plants. This level, it is believed, would perpetuate the value of public rangelands on a sustained yield basis.

8-2 Reductions will be made on the basis of actual use information provided by the operator and utilization data collected by BLM. Utilization data will be based on the Key Forage Plant Species Method (BLM Manual 4412.22B7c). Colorado State University was involved in the initial range survey and will continue to be involved when appropriate.

8-3 We appreciate your pointing out the net revenue that accrues to this level of operation. Cattle raising is marginal in terms of return on capital investment due to current market conditions. In spite of these conditions, everyone would benefit in the long run by preserving the value of public rangelands for future use.

8-4 Thank you for pointing out the importance of conversion of agricultural lands to other uses. Two points can be made here. First, given the economic data available to BLM, it was impossible to accurately predict how many ranchers might go out of business as a result of implementing any of the alternatives. An economic analysis of each operation would involve gathering data like percentage of income derived from livestock production and degree of diversification. Even if operators would consent to releasing such information, analysis would, in the long run, be time consuming and speculative at best.

Secondly, factors other than the success or failure of ranching operations may be more influential in determining the amount of land converted from agricultural use. Growth of coal and uranium mining may ultimately draw many new people to the area. State and county zoning would inevitably determine where development takes place. Location of land may also be important. More remote agricultural land may not be as attractive for development as land closer to towns and villages which currently is not used for agriculture.

In summary, the problem is complex and cannot be simply attributed to the success or failure of ranching operations. The problem of land use is serious, however, and BLM acknowledges the difficulty in managing public lands which it administers in the best interests of everyone.

March 81-2582

COMMENT LETTER 9a

United States Department of the Interior
HERITAGE CONSERVATION AND RECREATION SERVICE
MID-CONTINENT REGION
POST OFFICE BOX 25387
DENVER FEDERAL CENTER
DENVER COLORADO 80225

IN REPLY REFER TO

DES-80/17

MEMORANDUM

To: Colorado State Director, Bureau of Land Management
Denver, Colorado

From: Assistant Regional Director, Land Use Coordination

Subject: Review of Draft Environmental Impact Statement for the Proposed Domestic Livestock Grazing Program in the Royal Gorge EIS Area, Colorado

In response to your memorandum of March 21, 1980, we have reviewed the subject document and offer the following comments for your consideration.

NATIONWIDE RIVERS INVENTORY

The Nationwide Rivers Inventory is a two-phased screening process being conducted by the Heritage Conservation and Recreation Service to identify the best remaining free-flowing rivers in the nation that may merit protection at the Federal, State, or local level. Phase I of the inventory, focusing on streams or segments still in a relatively natural, undeveloped condition, has been completed nationwide. Four streams in the Royal Gorge EIS Area were identified as meeting the established criteria--the Arkansas River (Colorado Highway 291 to Chalk Creek), Badger Creek (Mouth to Source), Grape Creek (Mouth to DeWeese Reservoir), and South Platte River (Gaging Station above Cheesman Reservoir to U.S. Highway 24).[1] All but the South Platte, which does not traverse BLM lands or any of the management units in the designated stretch, could be affected by the proposed action.

President Carter's August 2, 1979, "Memorandum for the Heads of Departments or Agencies" directs that:

> Each Federal agency shall, as part of its normal planning and environmental review process, take care to avoid or mitigate adverse effects on rivers identified in the Nationwide Inventory prepared by the Heritage Conservation and Recreation Service in the Department of the Interior. Agencies shall, as part of their normal environmental review process, consult with the Heritage Conservation and Recreation Service prior to taking actions which could effectively foreclose wild, scenic, or recreational river status on rivers in the Inventory.

[1]Phase II, which will consider such positive factors as recreation and wildlife values, is just being initiated in the western regions of HCRS.

COMMENT LETTER 9b

We do not believe that the preferred alternative proposal will result in long-term adverse impacts to the Arkansas, Badger, or Grape. The streams will, however, be subject to certain impacts that should be addressed in the EIS. We submit the following for your consideration:

9-1 (1) Chapter 2, Preferred Alternative, Facility and Treatment Design Features--Add a proviso to the effect that "Facilities constructed along stream segments identified in Nationwide Rivers Inventory will not impair their suitability for future wild, scenic, or recreational river status."

9-2 (2) Chapter 3--Add one paragraph detailing the fact that four streams in the EIS study area have been identified in the NRI as having values described previously in our comments. This addition need be no more detailed than the Wilderness discussion in Chapter 3.

9-3 (3) Chapter 4, Preferred Alternative, Impacts on Water Resources, Impacts on Water Quantity--Much of the value of a natural, undeveloped stream is a quality of its undisturbed riparian vegetation. It should be stated in the document whether oakbrush burning (allotment 224) or pinyon-juniper thinning (allotments 193, 197, 237, 238, and 243) will affect the Arkansas, Badger, or Grape corridors and, if so, to what extent those activities constitute adverse effect.

9-4 (4) Chapter 4, Preferred Alternative, Impacts on Water Resources, Impacts on Water Quality--While short-term impacts of the preferred alternative may indeed be slight and long-term ones negligible, based on acknowledged alterations in existing runoff and sediment load we believe the statement "no changes in water quality are anticipated" begs qualification.

9-5 (5) Appendix D, Tables D-3, D-4, and D-5--Badger Creek traverses the northwest corner of unit number 60. If the Management Activity in that unit would affect the aquatic resource, the table(s) should be revised.

NATIONAL NATURAL LANDMARKS

9-6 Two National Natural Landmarks are located within the Royal Gorge EIS Area. They are the Garden Park Fossil Area and the Indian Springs Trace Fossil Site. The Garden Park Fossil Area is located about 5 miles north of Canon City and the area designated consists of 40 acres (SE¼ SE¼ Sec. 28, T. 17 S., R. 70 W.) entirely under BLM jurisdiction. The Indian Springs Trace Fossil Site is located about 6 miles northeast of Canon City, and although the entire 40-acre area is under private ownership, we understand that much of the adjacent land is under BLM jurisdiction and contains similar rock formations and fossils. We find no mention of either Landmark in this draft statement. We suggest that the final statement recognize these Landmarks and describe what effects, if any, the selected grazing program will have on the sites. If grazing is planned and would damage any fossil resources, we suggest that the BLM consider modifying the program (e.g., by fencing the areas and reducing or eliminating grazing) to minimize impacts.

/s/ Robert J. Arkins

RESPONSES

9-1 Such a proviso has been added.

9-2 This has been done.

9-3 Locations adjacent to riparian areas where burning or thinning would take place would have a buffer zone of unburned vegetation extending 200 to 300 yards to either side of the stream, in accordance with the Royal Gorge Management Framework Plan. Maintaining such a corridor should prevent most if not all adverse effects to riparian vegetation.

9-4 Although total dissolved solids and salinity in streams are related to the quantity and characteristics of the sediment load, only minor changes in water quality are anticipated because decreases in sediment load are relatively small.

9-5 There are no management activities planned in unit 60 which could adversely affect Badger Creek.

9-6 The Garden Park Fossil Area was identified in Chapter 3 as occurring in grazing unit 147. The area has been grazed for the last hundred years. Livestock grazing is proposed to continue in this area. The Denver Museum of Natural History is currently excavating and salvaging fossils there. The Royal Gorge Resource Area Unit Resource Analysis has recognized the recreational and educational values of fossil resources. If necessary, fossil resources will be protected under guidance of the Royal Gorge Management Framework Plan.

COMMENT LETTER 10

COLORADO HISTORICAL SOCIETY

The Colorado Heritage Center 1300 Broadway Denver, Colorado 80203

Mr. Stephen Ellis
A-95 Clearinghouse
520 State Centennial Building
1313 Sherman Street
Denver, Colo. 80203

MAY 13 1980
DIV. OF PLANNING

Dear Mr. Ellis:

This is to acknowledge receipt of the Royal Gorge EIS Area Proposed Domestic Livestock Grazing Program

DATE RECEIVED 3/26/80 DATE DUE 5/10/80

The federal agency has outlined certain provisions in this document for cultural resources management to comply with Executive Order 11593 and the National Historic Preservation Act as amended.

Once these conditions have been adhered to, in consultation with this office, in accordance with 36 CFR 800, compliance will be achieved.

Thank you for the opportunity to comment on the proposed project.

If this office can be of further assistance, please do not hesitate to call upon ES Reviewer Betty LeFree (Office of the State Archaeologist) at 303-839-3391.

Sincerely,

Arthur C. Townsend
State Historic Preservation Officer

cc: Dr. Howard Pomeranz, Acting
~~Dr. Bruce Rippeteau~~, State Archaeologist
Mr. James Hartmann, Coordinator, Historic Preservation

Compliance
Form No. 518

COMMENT LETTER 11

POST OFFICE BOX 1948
672-3321

The News-Review

345 N. E. Winchester Street
Roseburg, Oregon 97470

FROM Philip D. Neiswanger, Publisher

TO Melvin D. Clausen COPIES DATE 5-15-80

RE: Printing of Environmental Impact Statement in newspaper format

I join those who have made favorable comments regarding the experimental printing of an EIS in newspaper format. I find the document to be every bit as readable, and possibly moreso, than the many I have seen in book form. In view of the considerable savings you feel have been realized in printing costs, it would seem this program ought to be pursued and expanded.

I am unable to give you a price estimate on a similar job in our plant at this time for several reasons. We do not stock 50-pound paper and so I have no idea of either its cost or availability. Secondly, any price quote would depend greatly on the number of copies needed and I don't find that information in your letter.

Philip D. Neiswanger

COMMENT LETTER 12

United States Environmental Protection Agency

Region 8
Suite 103
1860 Lincoln St.
Denver, CO. 80295

Colorado, Montana, North Dakota, South Dakota, Utah, Wyoming

EPA

MAY 16 1980

REF: 8W-EE

Charles W. Luscner
Acting State Director
Bureau of Land Management
Colorado State Office
Room 700, Colorado State Bank Building
1600 Broadway
Denver, Colorado 80202

Dear Mr. Luscher:

The Region VIII office of the Environmental Protection Agency has completed its review of the draft environmental impact statement (DEIS) on the Royal Gorge Proposed Domestic Livestock Grazing Program. Our evaluation of the draft EIS indicates no major environmental impacts regarding water quality. The proposal to immediately decrease AUMs from approximately 40,000 to 14,000 to increase vegetation productivity and the rotational fencing of stream segments should improve water quality in the surrounding streams.

According to the procedures EPA has adopted to categorize the nature of our comments, these comments will be listed in the Federal Register as LO-1. Briefly, this means we have no objections to the action as proposed and we believe the impact statement is adequate.

Sincerely yours,

for Gene A. Lucero, DRA
Roger L. Williams
Regional Administrator

COMMENT LETTER 13

SRM SOCIETY FOR RANGE MANAGEMENT

801 N. Pitkin
Pueblo, Co. 81004

COLORADO SECTION

June 4, 1980

District Manager
Bureau of Land Management
P.O. Box 311
Canon City, Colorado 81212

Dear Mr. Albright,

It has been my privilege to review the Draft Environmental Impact Statement for the Royal Gorge EIS area, on behalf of the Society for Range Management. I have watched this area for many years from my homes at Gardner, Trinidad, and Pueblo.

There is no doubt that much of the area has been overgrazed for many years. The preferred alternative is the best way to put the range on the road to recovery. The combination of reduced stocking and range improvement practices are needed to bring about the desired upward trend in range condition.

While it is true that changes in species composition are slow when annual precipitation is as low as it is in most of the Royal Gorge EIS area, vigor and production should increase a great deal. There is a good possibility that more than the 20,763 AUMs per year predicted within 20 years will be available.

I wish to commend the BLM for a very comprehensive job of preparing this Environmental Impact Statement.

Sincerely,

Ross L. Campbell
President, Colorado Section

cc: Floyd Hinsinger, SRM Executive Secretary

March 81-2582

My name is Frank Dilley and I am a rancher living in Garden Park. I am a permittee of the Bureau of Land Management of about six thousand acres. I have lived on this place for forty years and have been acquainted with the area for many more years.

I am a past President of the Fremont Cattlemen's Association and a former charter member of the Southeastern Colorado Water Conservancy District Board.

I was here when the Taylor Grazing Act was passed. Believe me your changes were in order at that time. I am a believer that it was needed and was a cure. It has come from a declining range to one we can be proud of. The gullies have healed and the sod has thickened to where it can stop a lot of run-off in downpours. We had more forage left over this spring than we had all together the survey year.

As to wildlife, the deer and elk seem not to like the BLM land. It seems they like our alfalfa fields and stack yards better. Right now they are healthy and prosperous. I have lived through cycles of first there are too many, then they get diseased and you don't have any for a few years. Big Horn sheep run in such rough country that it is not good for grazing. So very little conflit there.

Apparently, the surveyors made no distinction between summer

users and winter users and that makes a lot of difference. Anybody that knows enough to make such a survey, should know that gramma grass grows a lot more forage at an altitude of 5000 feet than it does at 8000 or 9000 feet. In effect you are penalizing some of the operators who have done the most for the BLM land. It is poor management, not to mention the terrible expense.

I think you made the survey in the driest year since 1934 and it was unfair to you and the ranchers both. It never greened up all summer. I am a member of the Fremont County ASCS Committee and we had to help a number of ranchers through a disaster program that year. Many cattlemen hauled their cattle to other pasture two or three counties away for the winter. I never felt the survey made enough allowance for that. They just thought it was over grazed pasture. They should see it now.

I do not mean this personal or vindicitive but instead to be helpful and clear up some of the misunderstanding of this survey.

Frank Dilley

COMMENTS FROM PUBLIC HEARINGS

The order of speakers at the public hearings held in Canon City, Colorado, May 8, 1980, follows:

Index No.	Speaker	Representing
14	R. N. 'Nate' Patton Canon City, Colorado	Self - Rancher
15	Lawrence Phelps Gunnison, Colorado	Colorado Cattlemen's Association
16*	Leonard Horn Wolcott, Colorado	Self
17	A. W. 'Bill' Dilley Canon City, Colorado	Self-Rancher
18	John E. Wilson Canon City, Colorado	Self-Rancher
19	Robert M. Hyde Fort Collins, Colorado	Self-College Extension Specialist
20*	R. N. 'Nate' Patton Canon City, Colorado	Self-Rancher
21	Ray Burke Denver, Colorado	Colorado Department of Agriculture
22	Wayne Shoemaker Canon City, Colorado	Fremont County Cattlemen's Association

*No response made by BLM. Only the comments which required a response have comments printed in this EIS. Complete transcripts of the public hearings are available for review at the Canon City District Office.

The following are portions of spoken comments presented at the public hearing conducted in Canon City, Colorado, May 8, 1980 . Only those portions which required a response were reprinted along with the response from BLM.

R. N. 'Nate' Patton

14-1 My concerns regarding the background information upon which the statement is based are in three areas:

1. The validity and accuracy of the 1977-78 range survey, especially as it concerns carrying capacity and trend.

14-2 2. The accuracy of the erosion and sedimentation tables contained in Appendix G as applied to specific allotments.

RESPONSES

14-1 The range survey which you refer to only estimated the carrying capacity. Trend (apparent trend) was determined separately and was not used in calculating the carrying capacity. However, when these two estimates are viewed jointly, it is possible to conclude that more than moderate use of range plants is being made. How much more will be determined by using actual use data supplied by livestock operators and utilization data collected by BLM. The survey is only an estimate and will be field checked before definite license modifications are made. All reductions (or increases) made will be based on actual use and utilization data and not simply on the 1977-78 range survey.

14-2 The erosion and sedimentation tables you refer to were completed by using the SCS Flood Hydrograph Method (BLM Manual 7832.3 and 7315). The range of figures portrayed in the tables when compared to other areas in the west are average. On unit 149, the estimated sediment yield in tons per acre per year is 0.95. In layman's terms this means that roughly 2,000 pounds of soil are moved on an acre each year. It does not mean that 2,000 pounds of soil are moved off of each acre into the gullies and stock ponds.

March 81-258

14-3 3. The basis of the economic studies included in the statement.

RESPONSES

14-3 The basis for the economic studies was a study done at Colorado State University by E. T. Bartlett, R. G. Taylor, and L. E. Mack entitled 'Economic Effects of Reduction in Federal Grazing Upon the Economy of Colorado, Draft Report'. The regional statistics which apply to the EIS area were used. A much better analysis of the economic impacts could have been made if each of the 93 ranchers would have given us detailed economic data about their operations. We do not believe this information is the business of BLM or the general public. In light of this, we used the best available data.

14-4 The designation of a declining trend to Allotment 149 as well as 78 percent of the surveyed area does bother me greatly, and I have not been able to determine the key or criteria upon which this designation was based. 149 has a sediment designation which, as I interpret the charts in the statement, converts into a sediment yield of approximately one ton of sediment per acre per year. This is in spite of the evident fact that many erosion control and stock water ponds built on the allotment 20 to 30 years ago, which have a drainage of 160 to 320 acres or more, show no evidence of silting up.

14-4 As was stated in the EIS, trend was not determined. Apparent trend was, however, determined and is much less sensitive to what is happening to rangeland resources than true trend. The severe drought may have influenced disproportionately the vegetative trend of the rangeland that observers were attempting to measure. Long-term trend studies will be set up by BLM. These studies, hopefully, will be more representative and less radically affected by short-term drought situations or other natural fluctuations.

14-5 I am concerned about the statement on page 10 that mountain muhly, Arizona fescue, needle-and-thread, and Indian ricegrass are designated as key species, and that management plans will be based on them.

14-5 Key species will be determined for each individual allotment. The four listed in the DEIS were to serve only as examples. Additional plants which could be key species include western wheatgrass, sideoats grama, or mountain mahogany. Production is not the only consideration in selecting a key species. Other factors such as former dominant species must be taken into account.

Lawrence Phelps

15-1 Without commenting on any particular area or allotment as I am sure there are individuals here that will do that who are more familiar with these areas than I am, I would like to state that we feel that before any final decision is made and before any proposed action is implemented, more utilization and trend checks should be made. We think that the information gathered at the time the survey was made was not accurate and adequate enough to make such a long lasting drastic decision as the preferred alternative. I would like to say that in our opinion the range survey that was taken in 1977-78 did not extend over enough years to truly establish carrying capacity and trend without further data.

15-1 Reductions or increases in livestock use will be made on the basis of actual use and utilization studies carried out by BLM and the livestock operator. The changes will be based on a moderate level (40 to 60 percent) of current annual growth of use on the key species.

15-2 My observation did not coincide with the information contained in Appendix G as it relates to erosion and sedimentation tables.

15-2 Information contained in Appendix G is based on the SCS Flood Hydrograph Method and existing BLM data. See response 13-2 for additional discussion.

15-3 Under the preferred alternative, it states in your summary on Page 6, that after 20 years live vegetation cover would increase 12 percent from 22.5 percent to 25.2 percent cover. Yet under another alternative, namely, the Elimination of Grazing on page 7, it states vegetative cover would increase 8 percent from 22.5 percent to 24.3 percent or less than in the preferred alternative after this 20 year period. This would indicate that grazing that is taking place on these lands is not that critical.

15-3 We believe that with livestock grazing a rangeland can be improved more quickly than without grazing. Our rangelands evolved under grazing by large herbivores and tolerate or even improve with it as long as there is not continuous overgrazing. Livestock play a role in seed dissemination and burying by trampling which increases germination and the eventual appearance of new plants. Large increases in cover could never be anticipated given our climatic conditions. Rather than try to greatly increase cover, BLM would prefer to convert some of the present vegetation to more productive and palatable species which would improve livestock production.

A. W. 'Bill' Dilley

17-1 I am disturbed by the guidelines used in the survey to determine range conditions for the Environmental Impact Statement. If the guidelines are correct and if the recommended livestock cuts will restore the range to its proper condition, we have various cemeteries scattered throughout the area that should be shining examples of what the range should look like.

17-1 The 1977-78 range survey was not used to determine range condition. Range condition was determined from the Royal Gorge Unit Resource Analysis carried out in 1978. It is a different study and not related to the range survey. On the other hand, carrying capacities were determined from the range survey and bear no relation to the determination of range condition. Appendix B of this draft EIS contains the methodology used in the range survey.

Cemeteries, rights-of-way, and other ungrazed areas are useful to BLM and SCS range conservationists in selecting key species for allotments and predicting forage production potentials.

82

John E. Wilson

18-1 I would like to state that I do agree with the range trend in your survey and more specific to Allotment Nos. 5245, 5247, 5248, 5250 and 5251. However, I have a question here; the range trend is marked 557 acres improving, 4403 acres static with zero acres declining. Then under AUM adjustment you have 447 AUM down. It seems to me that if the range is improving, and static, that an increase in AUMs would be more appropriate.

18-2 I would also like to state that in your proposed acquisition of private land for extending roads, I would be in favor of this if the roads were used specifically for range management and improvement and the landowner would have control of the roads on private land. I would not be in favor of the roads being opened to the public on private land as this could present a severe problem in instances as to off road vehicles and so forth.

Robert Hyde

19-1 Part of the problem may have occurred when only 2 of the 17 members of the grazing EIS tream were range trained, and none were trained in animal sciences. I would consider range livestock aspects sufficiently important in this EIS to warrant a greater percentage of the total team than they were.

19-2 There was only an estimated 2.7 percent improvement in vegetation cover projected over the next 20 years. It is commonly expected that a variation of 5 to 10 percent in vegetation cover estimates in the ocular reconnaissance method may well occur among field technicians. This acceptable range of variation in the method is greater than the anticipated improvement in vegetation cover.

19-3 Add the $2.4 million to be spent on range improvement practices to the above described losses and this seems a tremendous price for the public to pay for a 2.7 percent increase in vegetation cover, if, in fact, it could be achieved.

19-4 Ironic that 3.5 miles changed from fair to excellent condition while good and poor condition classes remained static. Was this done with good reason or is it unfounded numbers juggling?

19-5 We should all remember that riparian habitat, because of its very nature is unstable, subject to frequent extremes and is usually not climax. Condition classes excellent, good, fair, and poor are based on the climax system of ecology and don't fit well for riparian habitat which because of frequent disturbance doesn't reach and maintain climax status.

19-6 The stated reduction in consumptive water use by livestock and game is in error and contradictory.

19-7 Another apparent discrepancy is an improvement in vegetation cover by alternatives and can be depicted as follows: I will point out two points here. One, under the Preferred Alternative, the increase in cover at the expense of 25,157 AUMs grazing increase in cover would be expected to only increase 2.7 percent, while with the elimitation of grazing increase in cover would be expected to increase only 1.8 percent. That, with a cut in animal unit months grazing of 39,369.

Why does the Preferred Alternative that allows grazing result in a 2.7 percent increase in vegetation cover while elimination of grazing, after 20 years, results in only a 1.8 percent increase?

19-8 In Elimination of Grazing category it was stated that bighorn sheep habitat would not be affected, and one would assume no appreciable increase in bighorn sheep numbers. However, the next paragraph states an expected increase of 57 percent in bighorn sheep hunter days. How can this be? If numbers don't increase, the Divison of Wildlife will not issue additional permits. After 6 years applying and with three preference points before drawing a sheep permit, I have a good feeling of how protective the Division of Wildlife is of bighorn sheep.

RESPONSES

18-1 The 557 acres improving and 4,403 acres static are the predicted condition in 20 years if the Preferred Alternative is implemented. Present apparent trend data for unit 141 indicates that 55 percent of the area is declining in range condition (see Royal Gorge Planning Area URA in the Royal Gorge Resource Area Office).

18-2 When BLM attempts to acquire access, it will make every effort to work out a satisfactory agreement.

19-1 Even though only 2 of the 17 preparers of the EIS were range trained, the Royal Gorge MFP, upon which this EIS is based, was prepared with the assistance of an additional 3 range conservationists, and was reviewed and approved by at least 5 more range conservationists, all with at least 10 years of experience in BLM rangeland management.

19-2 We still expect small increases in cover to occur.

19-3 Increases in cover would not be the only benefit of improved rangeland management. Increases in vigor and production of plants would also occur and, with this, increased production per cow/steer. Rangeland improvement projects are not cheap and a benefit/cost analysis will be done by allotment before implementation of allotment management plans (AMPs).

19-4 Changes in condition class of riparian vegetation were done in a stream-by-stream evaluation. Please see comment 7-1 for additional information concerning riparian habitat.

19-5 The condition classes measure the relative ability of a stream to produce fish. Badger Creek is a good example of your point. Frequent flooding is maintaining this former excellent fishery in a poor condition class. Floods rip out riparian vegetation which shades and cools water and fill in holes used by fish to rest in.

19-6 The 'error' resulted when we used a different gallons per head per day estimate. Total water consumption by livestock is estimated to be 44 acre-feet and 6 acre-feet by wildlife.

19-7 As stated in comment 15-3 we expect to improve a range faster with grazing than without grazing. Seed trampling by livestock is one of the ways.

19-8 The DOW has a vigorous program for sheep management. Transplanting programs and treatment of diseases in present herds are two ways the DOW anticipates increasing bighorn population densities within present management boundaries.

March 81-258

19-9 Page 10, statements like, ' For example, livestock grazing would be restricted on some management units to summer, fall, and winter because spring grazing is detrimental to wildlife, especially big game.' This kind of statement can be interpreted only as an inherent bias toward big game over domestic livestock in grazing EISs. Competition between game and livestock may occur for a very brief period at spring green up when deer graze on whatever is green rather than selecting their normally preferred forb and browse diet.

19-10 Key species listed are for higher elevation than some of the range I observed. Granted each of these is an excellent key species if it is present or can be expected to become present in sufficient quantity to be a key species. Blue grama and western wheatgrass should both be considered as key species on at least part of the resource area. I think this is borne out on page 23 where blue grama is considered a subtype in the 5,000- to 9,500-foot range.

19-11 I would suggest at least some game proof enclosures be established to both livestock and big game as well as attempting to determine recovery rates.

19-12 It is a disappointment that this severe a livestock grazing cut is being proposed when only 26 percent of the area was surveyed and done during a known severe but fairly short-term drought.

19-13 Page 14, column 2. I was under the opinion that existing stocking rates would be continued for 3 years to get a better handle on trend and utilization and that adjustments would be made after that time over the next 3-year period if they were needed. This was recommended because of considerable concern over apparent trend and the drought time during which the survey was conducted. I am disappointed in this procedure not being recommended in the EIS.

19-14 Page 16, Column 2. Wayne Cook reacted 'as ridiculous' that watershed, fisheries, and wildlife specialists are sufficiently expert in range science to state that current grazing pressure far exceeds forage production. Where were these experts during our spring and fall tours?

19-15 The whole problem was inexperience in dealing with droughty sites in arid environments. This particular area was composed of very immature volcanic soils with very limited moisture holding capacity and very limited vegetation production potential.

19-16 The discrepancies in the survey and report, some of which I have pointed out, make me question the advisability of adopting the proposed alternative. A more viable alternative, and certainly less expensive, would be to start implementing range improvement practices as proposed in the alternative, but without reducing stocking rates at this time. Nearly all of the problems I observed could be corrected by additional water development, some weed and brush control measures, by rest rotation grazing on part of the resource area, deferred rotation grazing on part, and some changes in seasons of use. I am confident that big game habitat would improve, that surface runoff and sediment yield would decrease, that recreation potential could be developed, and that range condition, trend, and vegetation cover could be improved; each of these at least to the extent expressed in the preferred action.

19-17 I am concerned that impacts to both the ranching and business community in the resource area will be much greater than expressed in either my statement or in the EIS. This is because I was dealing only dollar losses resulting from specific grazing cuts. Cuts as severe as are recommended in the proposed alternative will force some ranchers out of the livestock business. This may have no wide-ranging effect if it is only the small parttime rancher affected. It may go further than this because of limiting, reducing, or eliminating grazing during a critical time in a critical area causing a ranching unit to be economically infeasible. If larger ranches are affected, and they may well be, the economic impacts will be wide-ranging in the resource area.

RESPONSES

19-9 The management systems we mentioned are deferred grazing systems. which you recommend in comment 19-16 Further, a number of ranchers along Texas and Currant Creeks lso share our interest in wildlife. They feed a great number of deer and are working with the DOW to eliminate problems.

19-10 The key species listed in the DEIS were ex amples only. Additional ones will be selected as appropriate. Arizon a fescue would obviously not be selected on low elevation blue gram ranges (5,000 feet) as a key specie. Selectig blue grama as a key spe ie above 5,000 feet would be difficult to justify, since it is a sod bound low productivity specie at these elevations. Blue grama is considered a increaser at these elevations under heavy use. Maintaining blue g ama as a dominate specie will not provide a diversity of plants in the di ts of livestock.

19-11 These types of exclosures are already being pl anned.

19-12 The range survey was conducted on 209, 62 acres out of 379,380 acres, or roughly 56 percent of the area. The survey was designed to estimate the carrying capacity of per nnial grass species which do not drastically increase or decrease du ing a short-term drought.

19-13 Adjustments will be made on the basis of actual use and utilization studies and carried out under existing regula ions and law.

19-14 Those stated opinions were the basis for some of the recommendations made in the Royal Gorge Manageme nt Framework Plan. Their opinions were not used in either the 19 77-78 range survey or the trend and condition survey conducted as apart of the Royal Gorge URA.

19-15 Qualifications of people who work on any range survey are always subject to challenge. However, the range survey was supervised by experienced professionals and most work wa done by students trained at Colorado State University.

19-16 What you have stated is exactly what we propose, with one exception. BLM will implement long-term tre d and collect actual use and utilization data from each allotment. Based on this data, adjustments (upward or downward) will be made or changes made in the livestock management system. The on difference we recognize between your proposal and our Preferred Alternative is that you believe the range survey is completely ina equate and should be ignored. The survey may have shortcomings but we believe it is adequate to indicate that most of the allotm nts may be overstocked. In any case, further studies will be made before adjustments occur.

19-17 First, 78 percent of the ranchers who co ld be impacted are small ranchers, having less than 200 total head in their operations. Second, income from agriculture is only 1.5 perce t of personal income in Fremont County and a large percentage o this undoubtedly comes from orchards near Canon City and Penrose. Reductions, if made (and the reductions have not yet been determined by the utilization studies), would not be severe. On intensively manag d units, where the reductions were called for in the Preferred Alt rnative, AUMs would be reduced from 23,548 to 7,031, a differenc of 16,517 AUMs. This would amount to a reduction of 1,376 anim l units each month. Each of the 93 operators who would be involved w ith intensive management, on the average, would have to reduce his he d size by 15 cows/steers if the survey were completely implemented nd each rancher got 100 percent of his cattle forage from public land As indicated in Table 3-4 of the DEIS, the average dependency of r nchers on public lands is about 18 percent. Therefore, each of the 9 3 ranchers on an intensive management unit might have to reduce his herd size by three cows.

19-18 In closing, I sincerely hope the Preferred Alternative will not be the opportunity to work closely with the Bureau of Land Management to implement needed improvements to bring about desired change, without significant reductions in AUMs of livestock grazing.

Ray Burke

21-1 In view of the serious implications, both economic and social, accruing to the area's cattle industry from decisions based upon sometimes questionable data, the Colorado Department of Agriculture and I as an individual would urge that the methods and raw data used be reviewed by an independent and impartial research team and then that group establish adequate utilization checks under field use conditions as opposed to the theoretical conclusion method so commonly resorted to by us bureaucrats under pressure.

It is our considered opinon that, before any hard and fast policy positions are adopted, the following recommendations be implemented:

21-2 1. Further on the spot utilization and trend checks using a 'best method' design drafted by recognized range management research personnel experienced in the utilization of frail western soils and plant life.

21-3 2. Extensive review of the 1977-78 range survey used in the EIS statement since there is apparently a wide disparity between the utilization data reported and, those data obtained by District and Area Range Specialists in the fall of 1979. The latter survey observations differ so markedly from those obtained in the 1977-78 report, as to warrant a more exhaustive and objective diagnoses of the problem before such heroic surgery as a 64-70 percent reduction in AUMs is performed. The operation may be a howling success from the surgeon's viewpoint but a dead patient can't very well sue for malpractice. In this case, the patient will be comatose or dead in 3 years after the proposed cuts are carried out!

21-4 3. That a critical reveiw of the economic portion of the report be audited by undisputed authorities in agricultural finances. Any livestock operator who nets $34,000 a year in this area isn't going to kill the goose that laid the golden egg by abusing the land! Such a broad claim should be documented.

21-5 4. The sedimentation tables referred to in Appendix G be critically reviewed. I have been personally acquainted with Royal Gorge Resource Area for some 45 years; having worked cattle for various ranchers in Pueblo, Fremont, Chaffee, and Park Counties starting in the 30's and through the intervening years in other livestock capacities. The range improvements carried out by stockmen through the years since the passage of the Taylor Grazing Act have been effective. Arroyas and head washes so prevalent 45 years ago have diminished to a comparative few, but more is left to be done, without question. Like the $34,000 2-year net income referred to in the economic report; the loss of between 1 and 2 tons of topsoil per acre per year stretches credibity somewhat when one looks back over a period of 45 years and remembers how bad it used to be.

21-6 5. If we are to obtain the optimum stocking level, let's determine the course to be followed based on the best facts obtainable and evaluated by the most competent range management authorities available. Let us apply the rule of common sense expressedby knowledgeable people rather than a computer which only parrots and compounds the errors it is fed.

RESPONSES

19-18 BLM intends to work very closely with the livestock industry in determining any policy and implementing any action which affects it.

21-1 The utilization checks will be conducted by BLM range conservationists. Ranchers and other interested parties are encouraged to accompany them on these inspection trips.

21-2 Your recommendation is noted and the best personnel available will conduct the actual use and utilization studies.

21-3 See comment response 8-1.

21-4 The economic portion of the analysis was based on a study at Colorado State University which was jointly sponsored by BLM and the Forest Service. We believe that the independent research carried out by CSU was a fair and honest evaluation. When dealing with such a diversity of agricultural operations, individual situations tend to be obscured by an average picture. Such a study is of value to determine the order of magnitude of impacts, however.

21-5 One or two tons of topsoil per acre per year will not be lost. It will only be moved. The amount of soil lost from each acre was not calculated. The movement of 1 or 2 tons of topsoil per acre per year is average for western ranges. In mountainous areas geologic erosion is a natural phenomenon.

21-6 BLM did not develop the procedures and methods used in the 1977-78 range survey, it only borrowed them. The survey was developed by competent range management authorities and is used elsewhere on rangelands in the west to determine stocking rates. The use of a computer merely sped up the calculation process.

March 81-25

Wayne Shoemaker

22-1 As past President I would like to thank the district for the working relationship permittees of the county have with the BLM. Of course our main interest in this Environmental Impact Statement concerns grazing and the 1977-1978 range survey. I realize the problems with adverse terrain and inaccessible parcels which make an accurate survey so hard to come up with. We as cattlemen object to the statement that the survey area was 70 percent on the average overstocked when actually maybe it wasn't. Three units have been identified as 'showing potential for increase for grazing.' Then why in the Table 24, those three units have present use of 340 AUMs and proposed use at 235 AUMs, which is a reduction of 105 animal unit months.

22-2 Under the heading Issues to be Resolved, 'The range survey is an estimate only and will be adjusted either upward or downward on the basis of actual use and utilizations studies until a moderate level of grazing is reached.' This is okay, but, I also think that if the actual use studies show moderate use or less, with present allotted AUMs according to the survey, and be allowed increases if actual use so warrants.

22-3 Also, that the results of the utilization studies be on file in the Royal Gorge Resource Office in Canon City, along with the 1977-78 range survey so reference can be made to both.

22-4 Also, to list mountain muhly, needle-and-thread, Arizona fescue, and Indian ricegrass as key species at this altitude with our blue grama and western wheatgrass is ridiculous.

RESPONSES

22-1 Table 2-4 is in error. The 340 should be under the 'proposed' column and the 235 should be under the 'present' column. We understand the cattlemen's objection to our view that public lands are overstocked. BLM also understands the limitations of its estimates and will work to modify them with actual use and utilization studies.

22-2 As stated in the Royal Gorge Management Framework Plan, increases will be based on actual use and utilization studies, and any allocations based on a multiple use decision at that time.

22-3 The utilization studies, when completed, will be public documents and available for inspection. While the data are being collected, the rancher and any other interested parties are encouraged to accompany the person collecting data.

22-4 We agree. The species listed in the DEIS were examples only. See comment responses 13-5 and 19-10 for additional information.

82

ERRATA

Following are errata and their accompanying corrections. They are the result of public comment and governmental agency review.

Corrections were made only in the case of factual errors and verbal expressions that were likely to be misleading. Minor editorial and grammatical errors were not noted nor corrected.

Page 3, Summary, Item 3 - Change '20,763'. to '20,163'.

Page 3, New Format, first column, last line - Change 'Environmental Protection Agency (EPA) regulations' to 'Council on Environmental Quality guidelines'

Page 3, New Format, second column, first paragraph, last sentence - Change 'EPA' to 'CEQ'

Page 3, Summary, Item 4A - Change 'Preferred' to 'Intensive Management'

Page 6, second column - Change 'Preferred Alternative' to 'Intensive Management'

Page 6, third column, second sentence - Change '10' to '8'. Change last sentence to read 'Erosion on the intensively managed units would decrease by 25 percent, while no changes are anticipated on the 279 units with noninten ive management.'

Page 7, second column, paragraph 1 - Change '3.3' to '3.6'.

Page 8, second column, second paragraph, first sentence - Change '9 percent' to '5 percent'

Page 8, end of sidebar, add - The top photo shows Grape Creek near the Temple Canyon Road and the lower photo is of Texas Creek, 3 miles upstream from the Arkansas River. The presence or absence of riparian vegetation alone will not make a stream productive. Even if Grape Creek had the same vegetation conditions found on Texas Creek, the fish production on Grape Creek would be less than Texas Creek because of irregular summer stream flows caused by DeWeese Reservoir upstream. The purpose of these two photos is to visually compare a riparian area which has been heavily grazed by livestock (Grape Creek) to one which has received no livestock use (Texas Creek) in the last 3 years.

Page 9, Purpose, second column, after 'Preferred Alternative' add 'Intensive Mangement'

Page 13, Item 2 - Add the following citation:

'Programmatic Memo of Agreement Between the Dept/Interior, BLM, the Advisory Council on Historic Preservation, and the National Conference of State Preservation Officers regarding Livestock Grazing and the Range Improvement Program.'

Page 13, second column - Add 14. Rangeland improvement facilities constructed along stream segments identified in the Nationwide Rivers Inventory will not impair their suitability for future wild, scenic, or recreational river status.

Page 13, Table 2-3, first footnote, last sentence - Insert 'successive rest from livestock grazing during the growing season' instead of 'rest

Page 13, Table 2-3, first footnote, last sentence - Insert 'successive rest from livestock grazing during the growing season' instead of 'rest following the growing season.'

Insert in third column	'40-60' instead of '50'
	'40-60' instead of '40'
	'40-60' instead of '40'
	'40-60' instead of '30'

Add a third footnote - 'These are examples of key species only, additional [illegible] limited to western wheatgrass, mountain mahogany, aspen, and willow.'

Page 14, Table 2-4 - first line of the table should read across as follows:
+3 to +274 3 235 340

Page 14, fifth paragraph - Add after the last sentence: 'These reductions would only reduce livestock operators grazing bills since there would be no change in livestock operations required by BLM.'

Page 16, second column, third paragraph, first sentence - Delete 'and a number of watershed, fisheries, and wildlife specialists,'

Page 18 - Entries for 'Sediment Entering - Arkansas River (Million Tons/Year)' should be (changes underlined):
1.90 1.75 1.90 1.49 1.62 1.80

Entries for 'Soil Loss to Erosion' should be:
1.55 116 164 0.54 0.82 1.31

Entries for 'Soil Loss to Range Improvement Construction':
733,050 14,319 0 0 3,183 0

Page 19, first column - Change 'Colorado State Land Office' to 'Colorado State Land Board'

Page 27, map shading - Pink shading should appear within the pink lines and blue shading within the blue lines.

Page 37, first paragraph, first sentence - Replace '(Mbf)' with '(MMBF)'.

Page 37, Wilderness, second paragraph, first and second sentences - change 'decision' to 'recommendation'

March 81-258

Page 37, third paragraph - Replace the last sentence with 'Lands identified as Wilderness Study Areas will be managed to protect wilderness values in accordance with the Bureau's Interim Management Policy and Guidelines for Lands Under Wilderness Review (December 12, 1979).'

Page 37, first column, add after third paragraph - 'Four streams in the Royal Gorge EIS area were identified in the Nationwide Rivers Inventory (NRI) as being suitable for future wild, scenic, or recreation river status. The NRI is a two-phased screening process being conducted by the Heritage Conservation and Recreation Service to identify the best remaining free flowing rivers in the nation that may merit protection at the Federal, state, or local level.'

Phase I of the inventory, focusing on streams or segments still in a relatively natural, undeveloped condition, has been completed nationwide. Four streams in the Royal Gorge EIS meet the criteria - the Arkansas River (Colorado Highway 291 to Chalk Creek), Badger Creek (mouth to source), Grape Creek (mouth to DeWeese Reservoir), and the South Platte River (gaging station above Cheesman Reservoir to U.S. Highway 24). All but the South Platte, which does not traverse public lands or any of the management units in the designated stretch, could be affected by proposed grazing management systems.

Phase II, which will consider such positive factors as recreation and wildlife values, is just being initiated in the western regions of the Heritage Conservation and Recreation Service. Anticipating protection of these areas if they meet HCRS's criteria, BLM will ensure that facilities constructed in connection with proposed grazing management systems along stream segments identified in the NRI will not impair their suitability for future wild, scenic, or recreational river status."

Page 45, Conclusion - Replace 'a bane' with 'severe'.

Page 49, second column, second paragraph, fifth sentence - Change '183,200 tons' to '147,960 tons'.

Page 49, third column, fourth paragraph - Change to read 'Although total dissolved solids and salinity in streams are related to the quantity and characteristics of the sediment load, only minor changes in water quality are anticipated, because decreases in sediment load are relatively small.'

Page 50, first column, sixth paragraph, first sentence - Change '8,511' to '14,319'.

Page 50, second column - Conclusion should be changed to: 'Sediment entering the Arkansas River would gradually reach 8 percent reduction after 20 years. No change would occur in the amount of sediment entering the South Platte River. Erosion on the intensively managed units would decrease by 25 percent, while no changes are anticipated on the 279 units with nonintensive management.'

Page 50, Table 4-10 - Change the numbers in the following lines of the table:

3:	change '5,289' to '11,118'
4:	change '45' to '48'
7:	change '20' to '16'
10:	change '70' to '50'
Totals:	change '8,511.2' to '14,319.2'

In the last sentence of footnote 1 of Table 4-10, add the word 'which' after '(.6 Tons/Acre).'

Page 54, second column, first paragraph - Change to read 'Continuation of grazing at current levels would result in a 6 percent increase in soil erosion on 379,380 acres of public land in the long term (Appendix G-1).'

Page 62, third column, second sentence - Change 'pine seedlings' to 'tree seedlings.'

Page 65, third column, eighth paragraph - Replace the paragraph with 'Most sediment yield reduction would be long term, showing a decrease from 1.55 to 1.19 tons/acre/year on 255,449 acres, and no change on 123,931 acres. This amounts to an average yield of 1.31 tons/acre overall (a 15 percent decrease)."

Page 65, third paragraph - Change '169,100 tons' to '91,962 tons' and '9 percent' to '5 percent'

Page 66, next to the last paragraph - Change 'irreversible loss of 18,530 acres of conifer and pinyon-juniper vegetation types' to 'irretrievable loss of tree fiber on 18,530 acres of conifer and pinyon-juniper vegetation types.'

Page 66, last paragraph - There would be an 'irretrievable loss of vegetation' not 'irreversible loss of acreage.'

Page 67, first paragraph - There would be an 'irretrievable loss of vegetation' not an 'irreversible loss of vegetation types.'

Page 67, first column, second paragraph - First sentence should read 'Construction of range facilities would result in the loss of vegetative production on 43 to 145 acres which the facilities would occupy.'

Page G-1 - Insert at end of third column. The figure for existing sediment load in the Arkansas River was obtained from the U.S. Bureau of Reclamation. The number represents an estimate of the tons of sediment carried annually past the gaging station at Portland, Colorado. The number resulted from design studies of Pueblo Reservoir.

Estimates of changes in sediment load were made by adding or subtracting expected changes of sediment yield from public lands from the total load in the river.

72